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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/515,776	02/29/2000	Jeffrey S. Anderson	1006-024/MMM	1925

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LAO, LUN S

ART UNIT	PAPER NUMBER
2643	

DATE MAILED: 02/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/515,776	ANDERSON, JEFFREY S. <i>(D)</i>
	Examiner Lun-See Lao	Art Unit 2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 29 February 2000.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-32 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-32 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.

2. Certified copies of the priority documents have been received in Application No. _____.

3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ .
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .	6) <input type="checkbox"/> Other: _____ .

DETAILED ACTION

Introduction

1. Claim 1-32 of U.S. application 09/515,776 filed on 02/29/2000 are presented for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-5 and 7-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Holbrook (US PAT. 4,612,663).

Consider claim 1 Holbrook teaches that a universal four-channel multimedia computer speaker system connectable to an audio subsystem control circuit of a multimedia computer, comprising:

four separately positionable audio speakers (see fig.1 (14,16,18,20));
inputs (12) for receiving from the audio sub-system control circuit at least a first one of two pairs of audio input signals;

outputs for delivering distinct audio output signals to each of the four audio speakers (14,16,18,20), a first pair of the audio speakers receiving audio output signals corresponding to the first one of two pairs of audio signals (see col.2 line2 line 40); and

a proxy audio signal (28,32) component coupled to the outputs to provide to a second pair of the audio speakers a pair of distinct proxy audio output signals whenever the inputs receive only the first one of two pairs of audio input signals (see col.4 line 15-col.5 line10).

Consider claims 2-5, Holbrook teaches that the computer speaker system of the second pair of the audio speakers receive audio output signals corresponding to the second one of the two pairs of audio input signals whenever the inputs receive both the first and second pairs of audio input signals (see col.4 line 10-col.5 line 10); and the computer speaker system of further comprising a housing that supports the inputs and outputs and encloses the proxy audio signal component (see col.2 line 15-40); and the housing further encloses one of the four audio speakers 9see fig.1, (14,18,16,20); and the housing further encloses none of the audio speakers of the computer speaker system (see abstract).

Consider claims 7-10, Holbrook teaches that the computer speaker system of the pair of distinct proxy audio output signals (18,20) are generated from the first one of two pairs of audio input signals (see col.4 line 15-col.5 line 10); and the pair of distinct proxy audio output signals include inverse differences of the first one of two pairs of audio input signals (see col.7 line 25-col.8 line 62); and the first one of two pairs of audio input signals includes a right front audio signal R_{STEREO} and a left front audio

signal L_{STEREO} and the pair of distinct proxy audio output signals includes a right rear audio signal R'_{REAR} and a left rear audio signal L'_{REAR} wherein the proxy audio output signals correspond to the right and left front audio signals as follows:

$$R'_{REAR} = R_{STEREO} - L_{STEREO}$$

$$L'_{REAR} = L_{STEREO} - R_{STEREO}$$

(See col.7 line 25-col.8 line 62); and further comprising a signal enhancing filter (36) that filters (28,32) the pair of distinct proxy audio output signals for enhanced acoustic effect (see col.2 line15-35).

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 11-32 are rejected under 35 U.S.C. 102(e) as being anticipated by Cowieson (US PAT. 6,198,826).

Consider claims 11,21,23, Cowieson teaches a four-channel multimedia computer speaker system having inputs connectable to receive four distinct audio input signals from an audio sub-system control circuit of a multimedia computer and outputs

connectable to four separately positionable audio speakers, the improvement comprising:

a proxy audio signal component (see fig.2, 34) selectively coupled to the outputs to provide to a pair of the audio speakers a pair of distinct proxy audio output signals that are generated from a pair of audio input signals (see col.2 line 59-col.3 line 25); and

a first two of the four audio input signals including a right front audio signal R_{STEREO} and a left front audio signal L_{STEREO} and the pair of distinct proxy audio output signals including a right rear audio signal R'_{REAR} and a left rear audio signal L'_{REAR} , wherein the proxy audio output signals correspond to the right and left front audio signals as follows:

$$R'_{REAR} = R_{STEREO} - L_{STEREO}$$

$$L'_{REAR} = L_{STEREO} - R_{STEREO}$$

(see col.3 line 25-col.4 lines 45).

Consider claims 12-14 and 24-26, Cowieson teaches the computer speaker system of further comprising a switch element (34) that selectively couples the proxy audio signal component to the outputs (see col.2 line 59-col.3 line 45); and the switch element (21,22) is manually operable by a user (see col.2 line 59-col.3 line 45); and the switch element (34) is operated automatically according to which inputs are connected to receive audio input signals from an audio sub-system control circuit (see col.2 line 59-col.3 line 45).

Consider claims 15-17 and 27-29, Cowieson teaches the computer speaker system of housing that supports the inputs and outputs and encloses the proxy audio

signal component (see col.3 line 25-col.4 line 45); and the housing further encloses one of the four audio speakers (see fig.1a, (31,41,4,32)); and the housing further encloses none of the audio speakers of the computer speaker system (see abstract).

Consider claims 18-20 and 30-32, Cowieson teaches the computer speaker system of further comprising a subwoofer speaker that is within a sub-woofer housing and receives a sub-woofer audio signal, the sub-woofer housing supporting the inputs and outputs and enclosing the proxy audio signal component (col.1 line 60-col.2 line 35); and the pair of distinct proxy audio output signals (41,42) are generated from a first two of the four audio input signals (see col.2 line 10- col.3 line 25); and the pair of distinct proxy audio output signals include inverse differences of the first two of the four audio input signals (see col.2 line 59-col.4 line 45).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Holbrook (US PAT. 4,612,663) in view of Cowieson (US PAT. 6,198,826).

Consider claim 6 Holbrook fails to teach that the computer speaker system of further comprising a subwoofer speaker that is within a sub-woofer housing and receives a sub-woofer audio signal, the sub-woofer housing supporting the inputs and outputs and enclosing the proxy audio signal component.

However, Cowieson teaches that the computer speaker system of futher comprising a subwoofer speaker that is within a sub-woofer housing and receives a sub-woofer audio signal, the sub-woofer housing supporting the inputs and outputs and enclosing the proxy audio signal component (see col.2 line 1-15).

Therefore; it would have obvious to one of ordinary skill in the art, at the time the invention was made, it would have been to combine the teaching Holbrook and Cowieson to provide low frequency signal in the stereo sound system.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Ho (US PAT.5, 841,993) is citing to show other related to universal four-channel surround sound speaker system for multimedia computer audio sub-system.

9. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:(703) 872-9314

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Art Unit: 2643

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lao,Lun-See whose telephone number is (703) 305-2259. The examiner can normally be reached on Monday-Friday from 8:00 to 6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz, can be reached on (703) 305-4708.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 whose telephone number is (703) 306-0377.

Lao,Lun-See
Patent Examiner
US Patent and Trademark Office
Crystal Park 2
(703)305-2259


CURTIS KUNTZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600